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EXAMINER

CHAKRABARTI, ARUN K

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 07/12/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/877,526**

Applicant(s)  
**Usman**

Examiner  
**Arun Chakrabarti**

Art Unit  
**1655**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 8/8/01, 6/27/01, 7/26/01, 10/2/01, and 1/31/02.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-8, and 17-54, drawn to enzymatic nucleic acid molecules, classified in class 536, subclass 24.5.
  - II. Claims 9-16, drawn to method of nucleic acid modification, classified in class 435, subclass 91.1.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Groups I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the nucleic acid product of Group I can be used in the method of Group II or can be used in the synthesis of proteins or can be used to make antisense nucleic acids for gene therapy.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Lisa Hillman on February 12, 2002, a provisional election was made without traverse to prosecute the invention of Group II, claims 9-16.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-8, and 17-54 are withdrawn from further consideration by the examiner, 37 CAR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CAR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CAR 1.48(b) and by the fee required under 37 CAR 1.17(I).

### ***Specification***

6. It is suggested to change the phrase, "catalyzes" to "catalyze" on lines 19 and 25 of page 114, corresponding to claims 9 and 10.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 11-12 are rejected under 35 U.S.C. 102 (b) over Robertson et al. (U.S. Patent 5,225,337) (July 6, 1993).

Robertson et al teach a method comprising (Abstract) ;

contacting the nucleic acid sensor molecule with a system comprising at least one ssRNA and ssDNA under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to cleave the predetermined RNA molecule (Example 3, and Claim 1 and Column 10, lines 30-49).

9. (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

10. Claims 13-14 are rejected under 35 U.S.C. 102 (e) over Mitchell et al. (U.S. Patent 6,280,978 B1) (August 28, 2001).

Mitchell et al teach a method comprising (Abstract) ;

contacting the nucleic acid sensor molecule with a system comprising at least one peptide or protein under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to cleave the predetermined RNA molecule (Column 3, lines 25-27).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CAR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 9-12 are rejected under 35 U.S.C. 103 (a) over Robertson et al. (U.S. Patent 5,225,337) (July 6, 1993) in view of Williams (U.S. Patent 6,255,083 B1) (July 3, 2001).

Robertson et al teach a method of claims 11-12 as described above.

Robertson et al do not teach a method comprising at least one ssRNA or ssDNA having a SNP.

Williams teach a method comprising at least one ssRNA or ssDNA having a SNP (Column 2, lines 37-58 and Column 4, lines 24-33).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to combine and substitute a method comprising at least one ssRNA or ssDNA having a SNP of Williams into the method of Robertson et al, since Williams states, "For genotyping the target nucleic acid may be a single nucleotide polymorphism (Column 2, lines 44-

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46).” By employing scientific reasoning, an ordinary artisan would have combined and substituted a method comprising at least one ssRNA or ssDNA having a SNP of Williams into the method of Robertson et al, in order to improve the analysis of a target nucleic acid. An ordinary practitioner would have been motivated to combine and substitute a method comprising at least one ssRNA or ssDNA having a SNP of Williams into the method of Robertson et al, in order to achieve the express advantages noted by Williams, of an invention that provides the teaching that for genotyping the target nucleic acid may be a single nucleotide polymorphism.

13. Claims 15-16 are rejected under 35 U.S.C. 103 (a) over Long et al. (U.S. Patent 5,633,133) (May 27, 1997) in view of Williams (U.S. Patent 6,255,083 B1) (July 3, 2001)

Long et al. teach a method comprising (Abstract) ;

contacting the nucleic acid sensor molecule with a system comprising at least one ssRNA and ssDNA under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to ligate a predetermined RNA molecule to another predetermined RNA molecule (Abstract, Column 1, line 15 to Column 2, line 37, and Column 5, line 4 to column 6, line 38).

Long et al do not teach a method comprising at least one ssRNA or ssDNA having a SNP.

Williams teach a method comprising at least one ssRNA or ssDNA having a SNP (Column 2, lines 37-58 and Column 4, lines 24-33).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to combine and substitute a method comprising at least one ssRNA or

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ssDNA having a SNP of Williams into the method of Long et al, since Williams states, "For genotyping the target nucleic acid may be a single nucleotide polymorphism (Column 2, lines 44-46)." By employing scientific reasoning, an ordinary artisan would have combined and substituted a method comprising at least one ssRNA or ssDNA having a SNP of Williams into the method of Long et al, in order to improve the analysis of a target nucleic acid. An ordinary practitioner would have been motivated to combine and substitute a method comprising at least one ssRNA or ssDNA having a SNP of Williams into the method of Long et al, in order to achieve the express advantages noted by Williams, of an invention that provides the teaching that for genotyping the target nucleic acid may be a single nucleotide polymorphism.

### *Conclusion*

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D., whose telephone number is (703) 306-5818. The examiner can normally be reached on 7:00 AM-4:30 PM from Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (703) 308-1152. The fax phone number for this Group is (703) 305-7401.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.



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Arun Chakrabarti,

Patent Examiner,

February 20, 2002

*Arun K. Chakrabarti*  
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PATENT EXAMINER

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